WHEEL BALANCER

USER MANUAL

Pls read this manual before operation

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1、PREFACE

1.1 WARNING

Confirming the machine including the operation system, tools and accessories are operated normally and without any damage, you hand the machine to the cusatomers and the machine will endue some period of guranttee. During this period, the manufacturer will repair the machine or the unnormal parts of the machine or machine itself free of charge but will not be responsible for the damage and wear and tear caused by the unnormal usage, transportation and maintanance. And the manufacturer will not notify the customers when he renews the products or improves the production line.

1.2 RELATIVE INTRODUCTION

The purpose of this manual is to provide the users and owerners of this machine with the guide of safety and regulation to make the operators properly maintanence and operates the machine. If you carefully follow this instruction manual, the machine will provide you with the service of higher efficiency and more durable.
The following paragraphs will provide you with the damage level relateed to the machine.

Danger: operation can cause the serious injury or death

Warning:operation can cause the serious damage or unsafe

Caution: operation can cause slight wound and the damage of the objects

*Read the manual carefully before use the machine and keep this manual on the document folder near the machine for check at any time.

* Technical document should be considered to be the integrited part os the machine and it should be placed together with the machine when being sold to the new owner.

*Only when the series nuimber and model of the manual are same to the series number and model on the nameplate, the manual can be considered to be effective.

* Firmly keep in mind and follow the description and information of this manual at any time and the operators should be responsible for the operatiuoins not described and authorized in the manual.

* Some information of the manual comes from the pictures, it is normal that you will see some differences to the standard machines.

* Do not try the other operations exc except under the guidance of the personnels with experience. If necessary, please contact with the authorized service center for help.

1.3 INSTALLATION ENVIRONMENT REQUIREMENT

The select of the installation site must be in accordance with the current effective safety regulation. We should specially point out that the installation and operation of the machine must have the anti-moisture protective methods. If you want to correctly and safely use the machine, you should meet the following environment requirements:

- Luminosity in site should be at least 300lux
- RD: <85% (without condensation)
- Environment temperature: 0°—+50°C
- The floor of the ground should be enough solid to support the maximum weight of the machine.
- The machine should not be used in the environment with the potential exploded factors

1.4 SAFETY REGULATION

WARNING

* Not following the information and overlooking the warning labels will cause the series injuries to the operators and the other personnels.
* You can operate the machines after you completely read and understand the entire damages/warnings.
* The correct use of the machine needs the professional operator who must undertake the suitable training and can understand the written descriptions of the manufacturer, familiar with the safety regulations and follow all these descrioptions and regulations. And meanwhilem the operator should be a person without bad habit and of healthy of mentality and physiology.

Before operating the machine, you must have the following conditions:

- Read and understand the information and the description in the manual
- Fully understand the characteristic and the features of the machine
- Keep the unauthorized personnels from the operative site
- Be sure the installation should be in accordance with the current standard and the regulation
- Be sure that the operators os the machine should enbuce the proper training and operate the machine correctly and safety.
- Before power off the machine, do not touch the cables, motors or other electrical elements.

WARNING

Do not remove or wear out any label os danger, caution and warning or instruction. If the lable is lost or fuzzy, you should change it at once. If the label is missing, please contact with the nearest dealer to get it.

- See the accident precuation regulation related to the opertation and maintanence of the mechanism of high voltage and rotation
- The manufacturer will not be respondible for the damage and accident caused by the changes and modifications not authorized by the manufacturer.

WARNING

1.5 MEANING OF LABEL

NAMEPLATE：

The nameplate of the machine is sticked at the middle top position on the rear of the body and the meaning of them are:

A、model

C B 968

- 968 — model
- B — wheel balancer code
- C — wheel code

B、CE Certificate

CE This mark indicates that the machine has passed the CE certified

C、Serial number

It is the series number for applying the CE certificate.

D、Other contents

The other contents of the nameplate includes the technical parameters and the production date of the machine .

Lightning:

This label is at the rear of the machine or on the surface of the electrical control system indicating there is the connect of power supply. Warn the operator care about the safety.

Rotation mechnism warning label:

This label is sticked near the balance shaft to reminder the operator these are the rotation parts and are very dangerous and the operators must not close or use hand to touch the movable parts. The arrow indicates the rotation direction of the rotation mechanism.

Ground:

This symbol lies near the earth wire inside the machine to remind there is earth wire and the operator must not detach or loose the earth wire.

ATTENTION：

WEAR PROTECTIVE GLOVE

READ OPERATION MANUAL

WEAR PROTECTIVE GLASSES

POWER OFF THE ELECTRICAL SOURCE OF THE MACHINE DURING MAINTANCE

2、CARRIAGE, HOISTING, STORAGE AND TRANSPORTATION OF THE WHEEL BALANCER

2.1 CARRIAGE & HOISTING

Place, transport and store the machine according to the indication on the package container. When transport and hoist the wheel balancer, do not make the accessory hang, weight tray, balance shaft and display cover to be the weight bearing area because this can cause the damage of the machine or the precision error and even the injury to the operator. According to the construction of the wheel balancer, the center of gravity is on the right off-center, therefore when lift the machine unpacked, thelift arm of the hydraulic vertical lift of the forklift should be deflect to the right meaning not exceed 1/4 of the width of the machine. It is best to cover a layer of paper shell and rubber to avoid the slide of the machine. When lift and slide the machine, there should be the personnel to hold the machine and the maximum height of lifting should not exceed one meter. If exceeding one meter, you should fix the machine properly.

If hoist the wheel balancer, you can pass the wide cloth band through the clearance under the machine. The cloth band must be 2 pieces or more than 2pieces and the load bearing should be more than 500kg and the length should be of same. The position of the cloth band should be in accordance with the requirement of lifting the machine. When hoist, it is best that some personnel to hold the machine. When lift or hoist the machine, the speed should be not more than 35mm/s for fear that the much inertia causing the slide and

swing of the machine to cause the dangeous.

2.2Storage and transportation

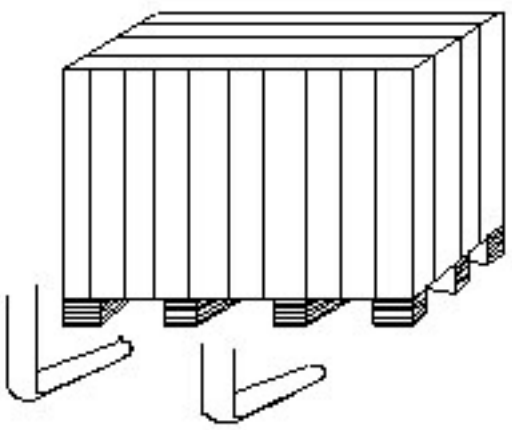
Storage：The machine should not be exposed and should be covered with the plastic film. For the pile of the vertical tyre changer, it should be 3layers is the paper package and it is 4 layers if it is in the wood package. And for the pile of the horizontal tyre changer in the wood package, it should be 3layers. And all the models should not be placed upside down.The should be stored in the warehouse of ventilation, dry and waterproof. In the storage area, the temperature should be controlled in the range of -10℃～55℃ and RH should be controlled in the range of 30%～90%. It is forbidden to store the machine together with the dangerous chemical, the inflammable and explosive materials or the objects easy to born the dust.

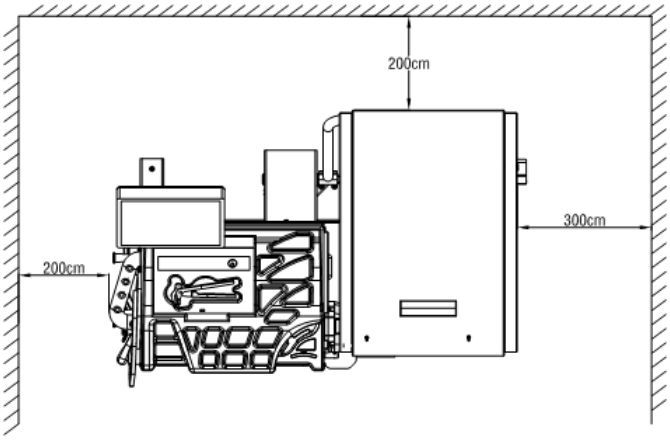
Transportation： The load of the machine should be accordance with the indication on the outer package and fix firmly. No matter what kind of transportation, the environment temperature and humidity should comply with the requirement of the storage requirement specified in term2.2. In the process of transportation, you should avoid the drench by rain, solarization、dumpage or collide. It is forbidden transport the machine together with the dangerous chemicals, inflammable and explosive materials or the objects easy to born the dust.

2.3 Installation

After confirming the package of the wheel balancer intact, you can carry the machine to the installation area as shown in the Fig1

Environment requiremnent at the installation site：Temperature 0℃-50℃，RH≤85%, without water source, fire source, dust, inflammable and explosive materials and the chemicals. The floor should be flat and solid.





Before installation, detach the upper cover of the package box of the wheel balancer and confirm the machines, accessoriues shipped together with the machine and the data you purchase according to the packing list. If you have any question, you can contact with the dealers.

The packing material such as plastic, polystyrene, nail , screw, wood and the carton must be placed into a scrap box and handle according to the local law and regulation. When install, detach the connect bolt between the wheel balancer and the pallet of the package box and move the machine from the pallet to the installation position. To guarantee the safety and

fast os the operation, there should be the distance more than 300cm from the wall of the building to the right and rear of the machine. And the distance of more than 200cm from the wall of the building to the left of the machine as shown in FIG2. After the wheel balancer is moved to the proper posiotion, drill 3 abchor holes on the ground according to the installation hole at the foot of the machine and then use 3 pieces of M10X160 anchor screws to fix the machine on the ground to guarantee the stability and reliability of the machine.

3、Installation of the each part of CB968 wheel balancer

Before install and use the wheel balancer, please carefully read this installation and operation manual and keep this manual in hand for the check at any time. Be sure that all the users have read this manual to exert the best performance of the machine to guarantee the safety.

Note：

Wear protective glove	Read the manual carefully before operation	Wear the goggle	When repair, be sure the power source is switched off

3.1PInstallation of the protective cover

Before use the machine, you need to install the protective cover. Please connect the protective cover as shown in FIG 3.

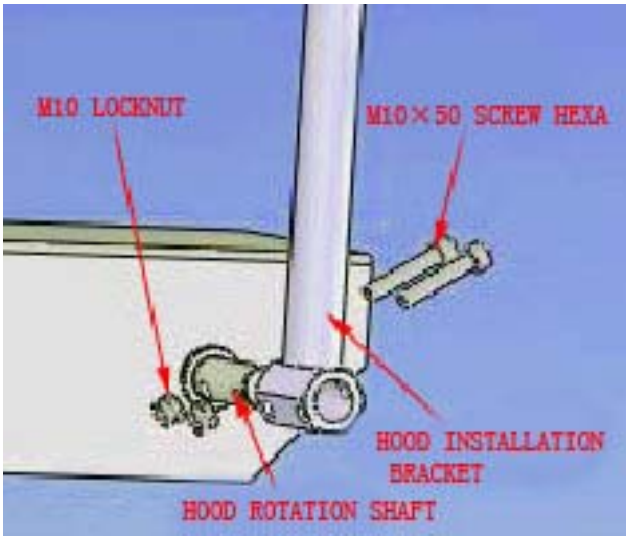


FIG 3

Pass the installation bracket of the protective cover through the rotation shaft of the protective cover on the body of the machine. When passing through, pay attention that the installation hole on the installation bracket of the protective cover should be aligned to the installation hole on the rotation shaft and then pass through 2pieces of M10X50 screws. Then use the locknut to completely lock. And the angle of the protective cover has been calibrated well.

3.2Installation of the display and the support bracket of the display

After check the installation braqcket of the display and the display are normal, first use 4 pieces of nM10X35screws, 4 plain washers and 4 elastic washers to fix the display installation bracket on the wheel balancer body and then use 4pieces of M4X12 screw to fix the display on the display installation bracket. If need pitch angle adjustment, you can loose the 2pieces of M5X12 lock screw at the connect position of the display installation board and the rotation shaft to adjust. After adjustment, relock. If need to adjust the height of the display and the left/right angles,

you can loose3pieces of M8X12 lock screw on the chassis of the display installation bracket to adjust. After adjustment, relock the screw as shown in the FIG4.

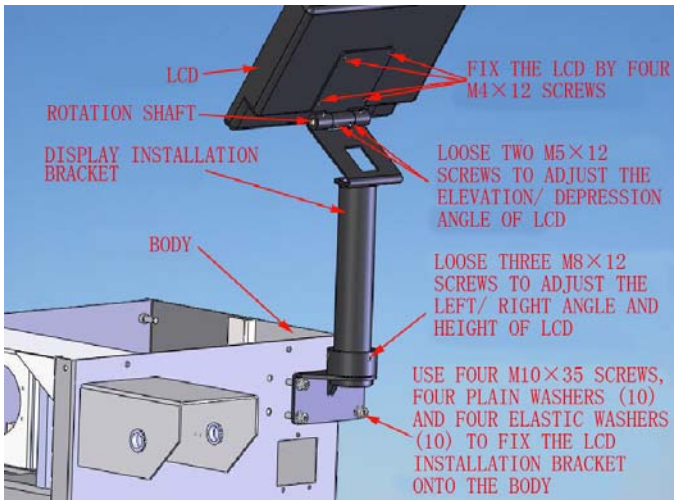

LCD
ROTATION SHAFT
DISPLAY INSTALLATION BRACKET
BODY
FIX THE LCD BY FOUR M4×12 SCREWS
LOOSE TWO M5×12 SCREWS TO ADJUST THE ELEVATION/ DEPRESSION ANGLE OF LCD
LOOSE THREE M8×12 SCREWS TO ADJUST THE LEFT/ RIGHT ANGLE AND HEIGHT OF LCD
USE FOUR M10×35 SCREWS, FOUR PLAIN WASHERS (10) AND FOUR ELASTIC WASHERS (10) TO FIX THE LCD INSTALLATION BRACKET ONTO THE BODY

FIG 4

3.3Installation of the width scale

After check the width scale is normal, use 3pieces of M10X40 screw and 3 pieces of spring washer to fix the width scale on the wheel balancer body. When fix, pay attention that the fix of the width scale bracket should be horizontal and firm and then connect the potentiometer cable of width scale and the extension cable in the body as shown in FIG5.

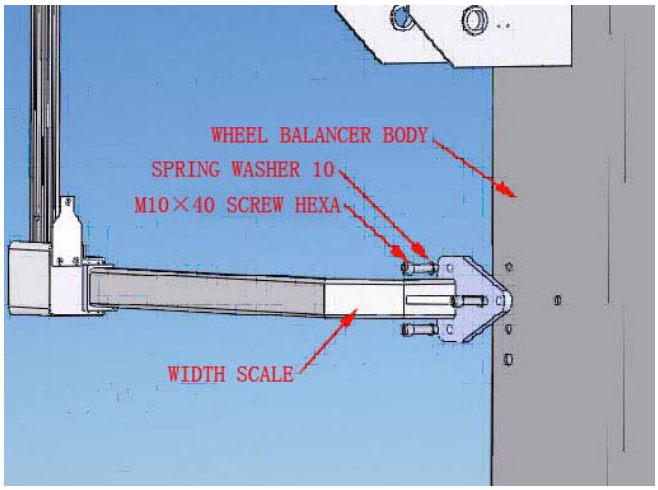


FIG 5

3.4 Installation of the thread shaft

Before installation, use the alcohol or compressed air to clean the rotation shaft of the balancing shaft anf the center hole of the thread shaft. Plug the open end of the thread shaft into the rotation shaft of the balancing shaft until the end of the thread shaft completely be contacted with the contact surface of the balancing shaft. Turn clockwise to tight. When tight, use the screwdriver or the other auxialiary tools to plug into the auxialiary hole to help the tight as shown in FIG6.

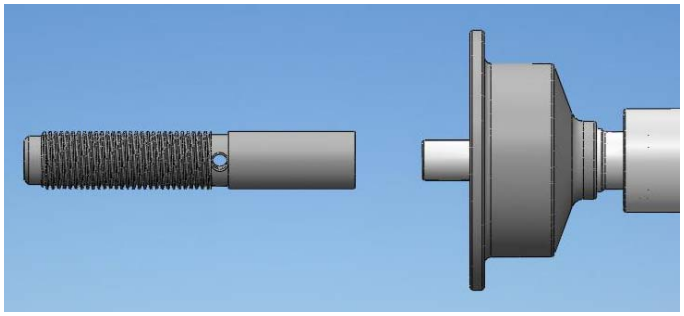


FIG 6

3.5 MOUNT WHEEL：

Check and clean the dust and mud and if there are foreign bodies, such as metal, stone, clipped weights on the surface of the tyre or wheel. And also check the air pressure of the tyre is according with the specified value. Check if there are deformation on the rim positioning surface and installation hole.

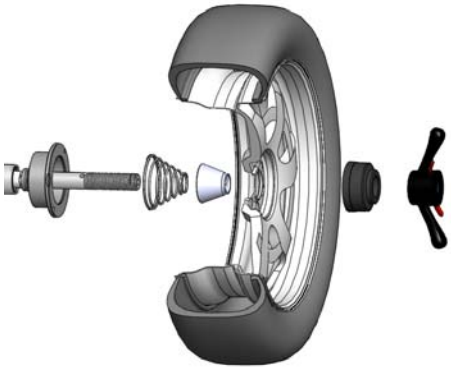
The installation methods of the wheel： Positive positioning, negative positioning & flange disk. You can select different methods according to the practice.

3.5.2 SMALL CAR WHEEL POSITIVE POSITION

Positive positioning is the normal method. It is featured with simple and quick operation. It is mainly suitable to the common steel rim and aluminum alloy rim with small deformation.

Main shaft ⟶ wheel（ direction of the rim installation surface is inside）⟶ cone ⟶ quick nut

3.5.3 SMALL CAR WHEEL NEGATIVE POSITION

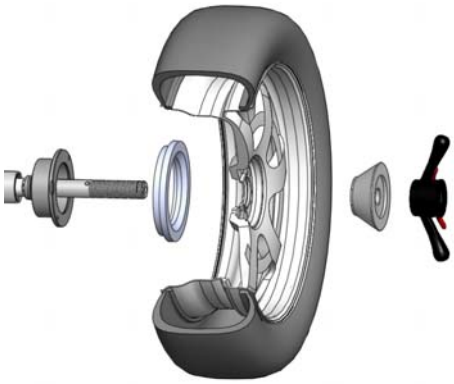


Main shaft ⟶ spring ⟶ cone ⟶ wheel ⟶ bowl ⟶ quick nut

When the deformation of the outside of the wheel, adopt this method to positioning to grantee the accurate positioning of the steel rim inner hole and main shaft. suitable to the steel rim, especially the thick ALU

3.5.4 LARGE FLANGE DISK POSITION（OPTIONAL）

This position is adapted to the mount of the large tire.



Main shaft ⟶ large flange plate（fixed on the main shaft）⟶ wheel ⟶ cone ⟶ quick nut

Note： The choice on the cone should be adapted to the rim center hole and pay attention to its direction. Or it will cause the inaccurate measurement.

3.6 Configurate the power supply

WARNING

* The machine must be grounded reliable or it will effect the test accuracy and the anti-interference power!

* Power supply must comply with the reate parameter of the machine!

* The electerical installation of themachine must be handled by the authorized professional personnels!

3.6.1 Circuit Requirement

Before layout the wires, you must confirm the electrical parameters. The power supply supplied by the customers must match the rated electrical parameters of the machine.When the users use the machine, he can not dirtectly connect the power cable into the electrical circuit. It should equip with the special protective circuit suitable to prevent the ddamage to the machine for the unnormal electriucal circuit. Generally, we should select the 10A circuit breaker two pole or 3pole. If use the greater circuit braker, you should equip the fuse in the circuit. The metal cross section of each lead power supply circuit should not lass than 1.5mm^2 and the earth wire should be 1.0mm^2. You can choose the oil-resistant cable 3-core or quard which is off-contact or in conduit. You can also adopt the one perfect insulated layer cable which is laid in the channel or inserting into the pipe. If there are always the equipments, vehicles or the personnels in/off or the work environment is no good, the power cable should

be pipe laying or off-contact.

3.6.2Requirement of the power supply

The voltage of the power supply should be stable and the circuit should have some capability of overload. The fluctuation of the voltage should not exceed 5% of the rated voltage and the fluctuation of the frequency should not more than 1Hz. Or we should sdd the frequency/ voltage stabilizer at the power supply position to keep the stable of the voltage and frequency.

3.6.3Socket requirement

All the car wheel balancer will be equipped with the power cable and plug when ex-work and the customer directly adapt the socket match the plug. But the socket must follow the following requirements：

Ⅰ Rated capacity of the socket should exceed 500VA and the rated current shoulkd be more than 10A；

Ⅱ Socket must have the reliable earth wire and should not use the two-pole socket without earth wire for without earth wire will influence the accuracy and interference power of the machine. The earth wire of the machine should be connected with the special earth wire and can not be connected with the water pipe and oil pipe.

Ⅲ Socket should be the socket with switch to power off the machine when the equipments are abnormal or no use of the machine.

Ⅳ The connect between the plug and the socket must be reliable.

Ⅴ It is better to use the special socket to supply the power to the machine and can not connect many devices.

3.7 Note for the installation and operation of the machine

* Do not keep the machine in the environment of extremely humidity and temperature. Avoid being installed near the heater, waterhead, air humidifier and stove.

*Do not install the wheel balancer in front of the window directly under the sunlight. If this situation can not be avoided, use the shield.

* Prevent the wheel balancer from the large quantity of dust, alcohol, ammonia gas, diluent and spray.

* When use the machine, unauthorized personnel should not close to the machine.

* Before move the machine, you should contact with your personnel of repair and service.

* When the weight of the wheel exceed 15kg， you should use the auxialiary lift and vertical device.You can not directly use your hand to lift the wheel to avoid the injury to your body.

* Before use the wheel balancer, you must use the anchor screw to fix the machine on the ground.This fix should be the 3-point –fix or the vibration of the machine when operation can cause the inaccuracy of the test result, especially the tire with the height more than 35kg.

* When the machine is in the process of operation, there should no the other electreonic or high power device interferring the machine and influencing the accuracy.

*Proper dressing such as glove, goggle and work suits. Not wear necktie, long hair,loose clothing or the sandal. When operation, the operators should stand beside the machine and unauthorized personnel should not close.

*When the illumination in the working site is not well, prepare the illumination device. Coomon dylight lamp

or incandescance lamp is OK. It is no need too light. The brightness should be such that will not influence the work.

3.8Important Note

* Do not look at the laser point directly in any case.
* Before operation, the operator should carefully read all the warning ladels and manual to avoid the injuries and damage to the operators or bystanders.
*Machine should be firmly fixed on the ground. Avoid installing the machine near the compressor.
*Do not detach the the protective cover.
*Do not detach or modify the machine by yourself.
*Prvent the rotation shaft of the balance shaft from being impacked.
* After switch off the machine, wait for 5seconds and then you can use the machine again.
* Do not place too much heavy objects on the console of the wheel balancer.
* If fault and the machine can not operated, please check the relevant contents. If unormal noise, smog or the other phenomenons suddenly, you should switch off the machine and pull out the plug and notify the relevant service personnel.
* If the function is not specified in the manual, you should not apply.
* Hand and any part os the body must not close to the rotation mechanism or the electrical connect. Before run the machine,you should check if there are damaged parts. Or you should not use the machine if there is any broken and cracked.
* In the emergency, if the wheel is not firmly locked and shake. Please press down the wheel balancer to stop the machine.
* Before balancing the wheel, operators should check all the wheels to see if there is any fault. Do not balance the wheel with fault.
*Do not try to balance the tire heavier than the standard design of the machine.
*Before balancing, be sure the installation of the wheel should be properly.
* Periodically maintanence the machine.

4、CB968 Technical Characteristic

4.1 CB968 Feature：

－ Adopt the LCD and the display is compltely and straight and the picture is clear and vivid
－Use the joystick to replace the traditional press key and the customer need not memory the functions of the relative press button to make the operation more convenient and faster.
－All the operation steps are equipped with the indications of animation and words to make the operation more direct and precisely to avoid the misoperation.
－The main control system all adopt thr quality computer components with the features of high stability and high intelligence.
－The mechanical main shaft adopts the high precise bearing driven with the feature of high precise, anti-wearance and low noise.
－For the realization of the automatic measurement of the size of the wheel and the laser position of the unbalance value, the test result becomes more accurate.
－Laser positioning can accurately indicate the unbalance position.
－Intelligent automatic calibration and the electreonic scale automatic marking functions
－The special functions of automatic tire counter, data back-up management and the balance shaft

self-calibration make the test more accurate and the machine management and follow-up service more convenient.

－With 5 ALU modes and MATCH mode

－With the functions of full automatic disgnosis and self calibration.

－Adopts the computer on/off power source to widen the voltage range

－Self-calibration and full automatic diagnosis

－High integrated and memory make it convenient to expand the relative functions and upgrade.

4.2MAIN TECHNICAL PARAMETERS OF THE PRODUCTS

No	Item	Technical Parameter	Remark
1	Rim suitable	Aluminum, steel and alloy rim	
2	Vehicle suitable	Car and light truck	
3	Balance mode	match、Dyn、Sta、5 ALU modes	
4	Driven	Electrical-driven	
5	Rated voltage and frequency	220V 50Hz	
6	Distance & diameter measure	automatic	
7	wheel width measurement	automatic	
8	Hood on/off	Standard equippment	
9	mm/inch conversion	Standard equippment	
10	gram/ounce conversion	Standard equippment	
11	Self-calibration	Standard equippment	
12	Self-diagnosis / error display	Standard equippment	
13	Brake	Automatic /manual	
14	Display	LCD	
15	Cycle	7s （16″ standard rim）	Cycle is not related to the weight os wheel
16	Max. spin speed	210r/min	
17	Accuracy	±1g	
18	Max. wheel width	20″	
19	Max. wheel diameter	47″	
20	Rim diameter	10″~25″	
21	Rim width	1.5″~20″	
22	Max. wheel weight	75kg	
23	Diomension（after packed）	1120X710X1180 （LXWXH）	
24	Weight of machine	163kg	NT
25	Working environment temperature	0~50℃	
26	Working environment humidity	≤95% at 20℃ 、≤85% at 40℃	
27	Noise	≤70dB	
28	IR	≥20MΩ	
29	Total Power	300W	

4.3 WORK PRINCIPLE

The micro CPU will provide the normal information if it checks each unit in the normal situation. And the operators can execute the balance operation. When balancing, MCPU can control the rotation of the main shaft of balancer tester through the drive interface. The unbalance signal sensed by balance sensor is sent to the micro-processor port through A/D converter. CPU will integrated analyze the unbalance signal and angle signal to calculate the unbalance value and display the value through the LCD unit. We can realize the man-machine talk through joystick and LCD as shown in FIG7..

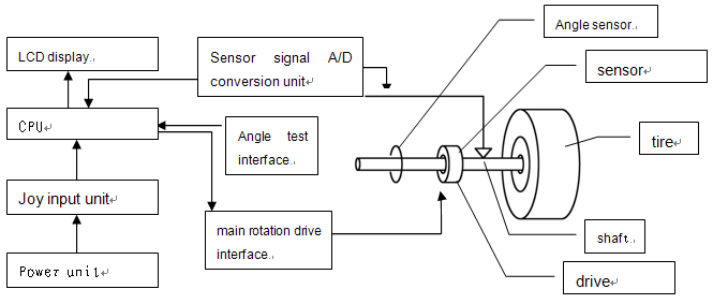


FIG7　CB968 WHEEL BALACER WORK PRINCIPLE

5 Construction of the wheel balancer

5.1Main constuction

Main construction of the wheel balancer as shown in FIG8 and FIG9：

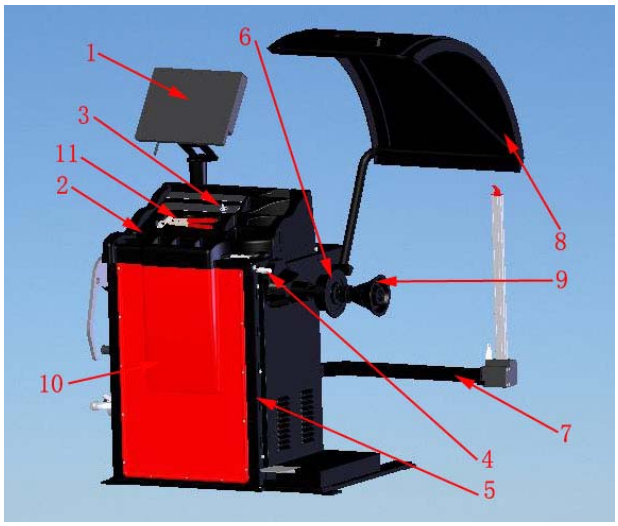


FIG8

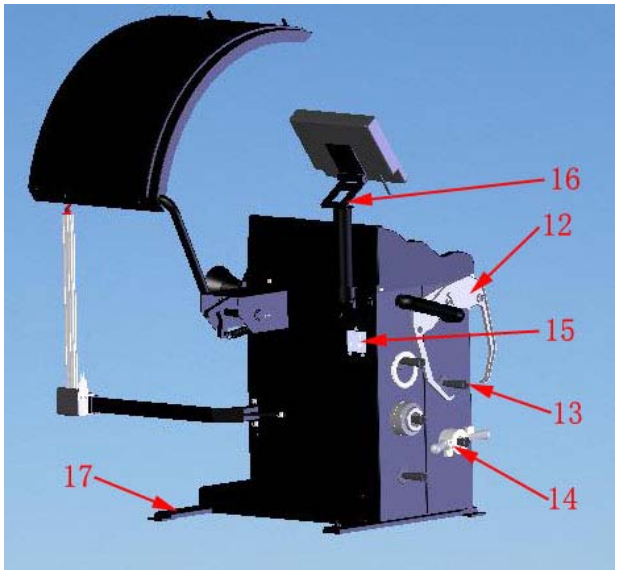
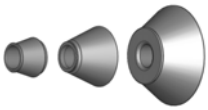
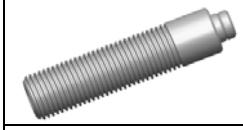


FIG9

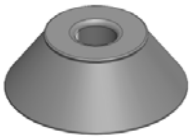
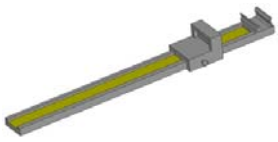
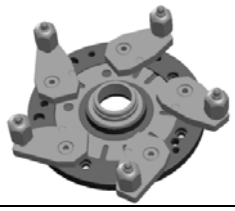
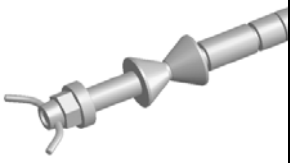
1.15" LCD	**2.**Weight Tray	**3.**Joystick
4.Automatic Scale	**5**.Body	**6**.Balance Shaft
7.Width Scale	**8**.Hood	**9**.Cone
10.Front Panel	**11**.Pliar	**12**.Caliper
13.Cone Hang	**14**.Quick Nut	**15.**Power Switch
16.Display Bracket	**17**.Seat	

5.2Accessory

Picture	Name	Quantity Pc
	Cone	1
	Pliar	1
	Quick Nut	1
	Spring	1
	Bowl	1
	self-calibration tool	1
	Width Scale	1
	Thread Shaft	1
	Weight	1
	Bowl Edge	1

	Hood	1

Optional Accesory

Picture	Name
	MJ-I I
	Large Cone
	Weight stick Ruler
	DK-W-1
	MJ-I
	4-hole Adaptor
	Flange Disk

	Centerless Rim Calipter
	DK-W-2

5.3Outline Dimension

As shown in Fig 10 and Fig11：

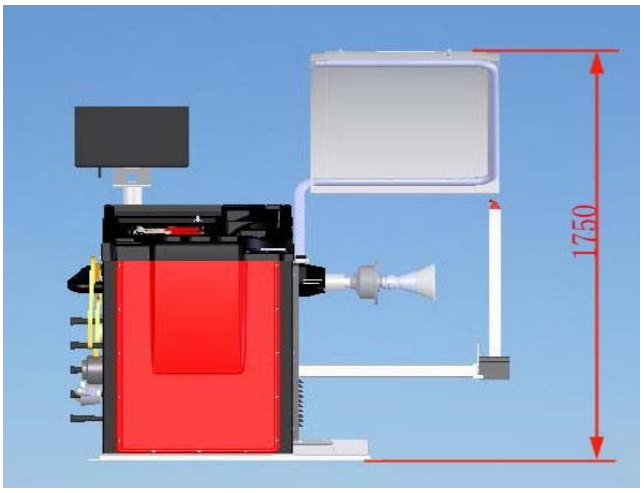


Fig10

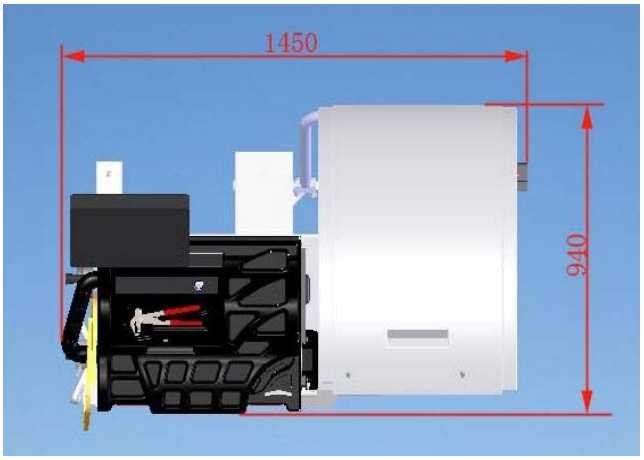


Fig11

6. Meaning of icons

6.1 Mode selection bar：

The mode selection bar is at the top of the screen.

Move the joystick to the left or right, you can choose the mode you need. When the mode has been delected, the mode selected will be enlarged and the edge will become green and light as shown in the FIG12.

FIG12

Instruction on each mode bar

DYN/STA mode icon:means the current system mode is dynamic/static mode. The default mode is the dynamic balancing mode. The balance weight calibration surface is at the edges on the both sides of the rim. After test, clip the weight on the calibration surface on both edges of the rim. If you want to check the unbalance value, you can only move the joystick upwards, And move the joystick upward once again, you will back to the dynamic mode.

ALU1 mode: After select the icon, it means that the weight calibration surface is located on the two calibration surface inside and outside the rim. After test, stick the weight on the two calibration surface.

ALU2 mode:After select the icon, it means that the weight calibration surface is located on the two calibration surface inside the rim. As shown of the picture in the left, after test, stick the weight on the two calibration surface inside the spoke.

ALU3 mode:After select the icon, it means that the weight calibration surface is located on the edge of the inside of the rim and the calibration surface near the spoke inside the rim.After test, clip the weight on edge inside the rim and stick the weight on the calibration surface near the spoke inside the rim.

ALU4 mode:After select the icon, it means that the weight calibration surface is located on the edge of the inside of the rim and the calibration surface near the spoke inside the rim.After test, clip the weight on edge inside the rim and stick the weight on the calibration surface near the spoke outside the rim.

ALU5 mode:After select the icon, it means that the weight calibration surface is located on the edge of the inside of the rim and the calibration surface near the spoke inside the rim.After test, stick the weight inside the rim and clip the weight on the edge outside the rim.

Match mode: Choosing this mode can match the static value of the tire and the rim to make the static unbalance value to reach the minimum value.

System setup mode: After choosing the icon, move the joystick downward to enter the system setup menu. At this time, a password input column will come out. Move the joystick rightward, downward and upward and then input the password of 111. Press down the joystick to confirm and enter the menu selection.

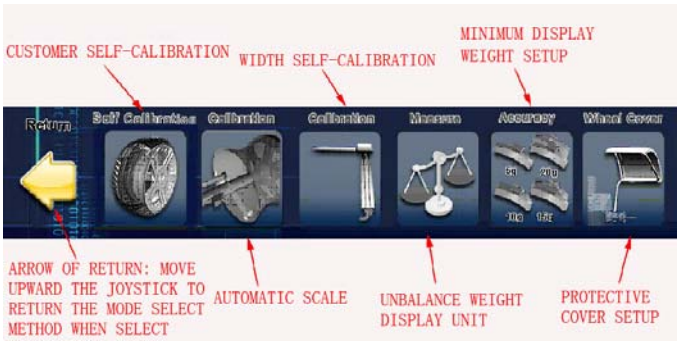
Help Info: After choosing this icon, move the joysticks downward to help enter the page of help. The current mode of the system is static mode.

6.2Setup menu

The setup menu is located in the bottom of the screen,

when choode menu，The setup menu will appear at the bottom of the screen. Move the joystick downward, you can enter the select of the system setup menu. If it is the first time to enter the system setup menu after start up, the password input column will come out. Move the joystick rightward, downward and upward and then input the password of 111. Press down the joystick to confirm and enter the system setup menu. You do not need to input the password if enter again without turn off the machine. The function of the system setup manu as shown in FIG13.

FIG 13


CUSTOMER SELF-CALIBRATION
WIDTH SELF-CALIBRATION
MINIMUM DISPLAY WEIGHT SETUP
ARROW OF RETURN: MOVE UPWARD THE JOYSTICK TO RETURN THE MODE SELECT METHOD WHEN SELECT
AUTOMATIC SCALE
UNBALANCE WEIGHT DISPLAY UNIT
PROTECTIVE COVER SETUP

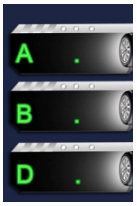
6.3Help Menu

Help menu is at the bottom of the screen. After select menu, the help menu will appear at the bottom of the screen. Move the joystick downwards to enter the selection of the help menu. The function of the help menu is as shown in FIG 14.

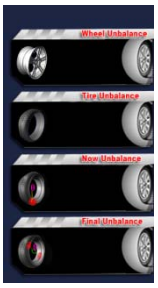
OPERATION MANUAL
EXPLODED DRAWING
MACHINE CODE AND THE RELATIVE INFO
Back
ARROW OF RETURN: MOVE UPWARD THE JOYSTICK TO RETURN THE MODE MENU METHOD WHEN SELECT
OPERATION CD
OPERATION INTERFACE LANGUAGE SELECT
COUNTING

FIG14

6.4Other icons



Display the wheel size parameters such as A、B（or A+）、D.



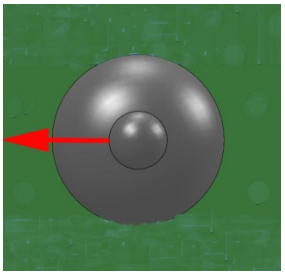
In the MATCH mode, display the static weight. From the top to the botom, it displays the static weight of the rim and tyre. After match, the wheel can reach the minimum static weight.

When the system display the unit of the weight is gram, it will remind the customer to clip the standard weight of 100g when self-calibration.

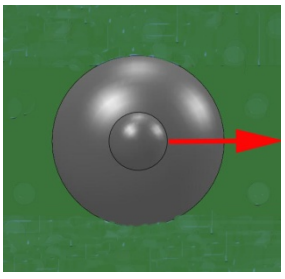
When the system display the unit of the weight is ounce, it will remind the customer to clip the standard weight of 3.5ounce when self-calibration.

7、Operation of the wheel balancer

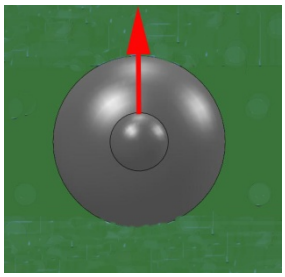
7.1Operation of the joystick



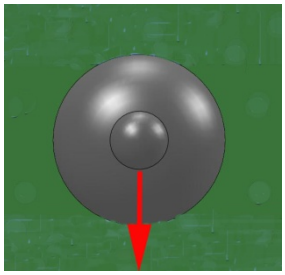
Move the joystick leftward：
Exit from the current status；
Select the icons leftside；
Decrease the input value when input the related parameters



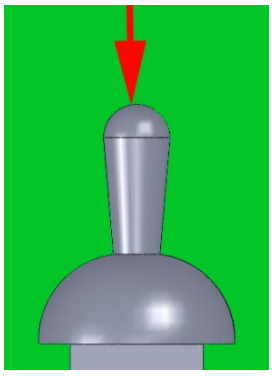
Move the joystick rightward：
Select the icons lrightside；
Increase the input value when input the related parameters



Move upward the joystick：
Enter into the wheel parameter input status in the mode menu.
In the AUL2、AUL3 mode, after the wheel test,move upward the joystick to enter the split function；
When the selection column，Move the joystick upward to return to the mode selection.
After complete the wheel test in the DYN/STA mode, move the joystick upward for one time, you can change from dynamic to the static and upward once more you can change from the static to the dynamic.



Move downward the joystick：
In the balance mode menu, enter the wheel parameter input status；
After finish the wheel test, move downward the joystick to check the real unbalance weight of the wheel；
When in the system setup mode, move downward the joystick to enter the system setup menu.



Press down the joystick：
Confirm the status；
Wheel balancer run；
Emergency stop when running.

7.2 Parameter selection after start up the machine

7.2.1Language selection of the operation interface

After start the machine, you can enter the mode selection menu. In the mode selection menu, you can select menu. The icon will be enlarge and illuminate. Move the joystick downward to enter the help menu and move the joystick rightward to select the language selection icon and at the moment the language selection column will appear as shown in the FIG15. Move the joystick upward or downward or upward to select the language you want to choose and press down the joystick to confirm.

Note： If not select the language, the default language is English.

7.2.2 Unbalance unit selection

After start the machine, you can enter the mode selection menu. In the mode selection menu, you can select menu. The icon will be enlarge and illuminate. Move the joystick downward to enter the system setup menu and move the joystick rightward to select unbalance unit display option and at the moment the unbalance unit display column will light up. Move the joystick upward or downward to realize the conversion between the g and OZ as FIG 16 shown. After select the unit you want and press down the joystick to confirm.

Note: If not select, the system defualt unbalance unit is g.

FIG 15

FIG 16

7.2.3Minimum unbalance weight display setup

Select the menu in the mode selection menu and the icon will enlarge and light up. Move the joystick downward to enter the system setup menu and move the joystick rightward to select the minimum weight display option and at the momnent the selection item will appear as shown in FIG17. Move the joystick upward or downward to select the suitable option and press down the joystick to confirm.

Note: If not select, the system defualt minimum unbalance unit display is 5g.

FIG17

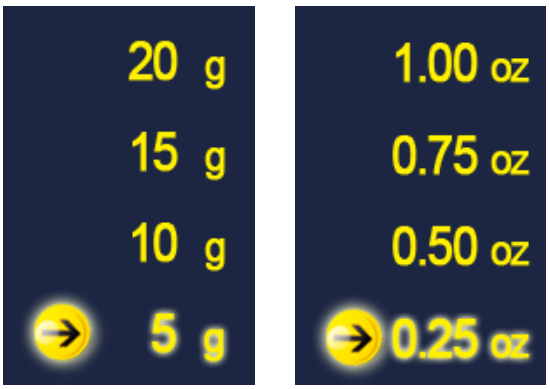


FIG18

7.2.3Protective cover setup

Select menu in the mode selection menu and the icon will be enlarged and light up. Move downwards the joystick to enter the system setup menu and move backwards the joystick to select the protective cover function. At the moment, the icon of the protective cover function will be enlarged and light up. Move upward and downward the joystick to select the on or off os the protective cover. Press down the joystick to confirm as shown in the FIG18.

Note：If not select, the system default protective cover is on. When lower the proitective cover to the specific position, the machine will spin automatically and when choose off, you need adopt the manual way to start spin.

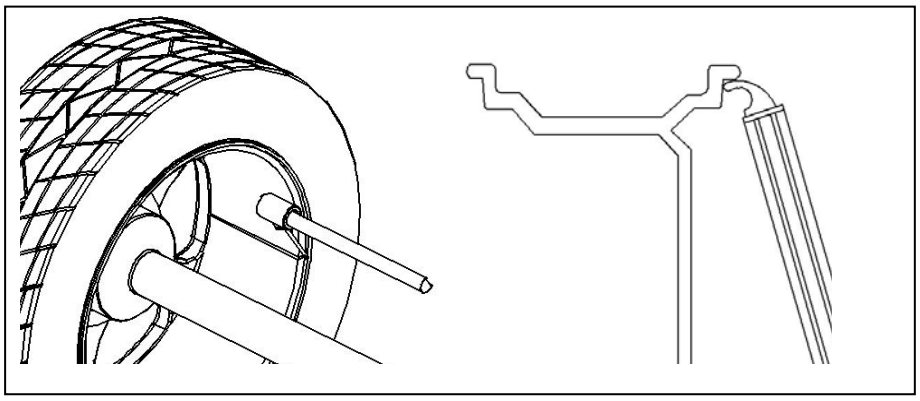
7.3 Wheel parameter input method

7.3.1 Manual input the wheel parameter

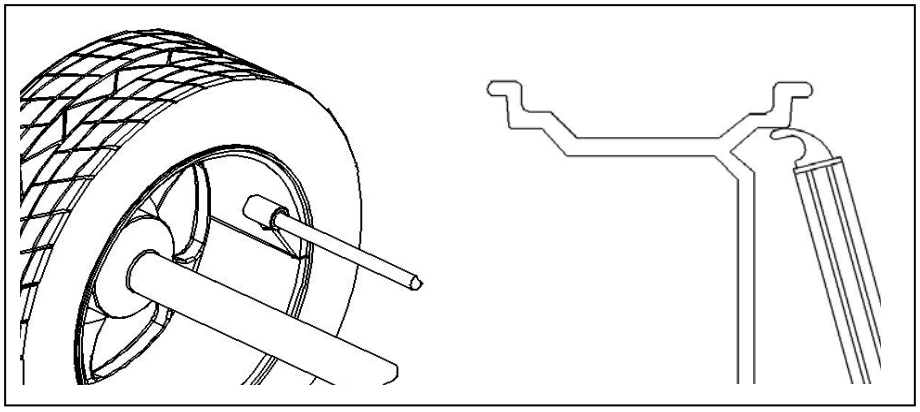
The wheel parameter measurement is normally automatically through the automatic scale and width scale. Of cause you can also manual input various parameters of the wheel. The manual input is select the operation mode and then move upwards and downward the joestick to select the parameter you want to select and move rightward or leftward to decrease or increase the parameter value. After input, press down the joystick to confirm.

7.3.2 utomatically measure the wheel parameter

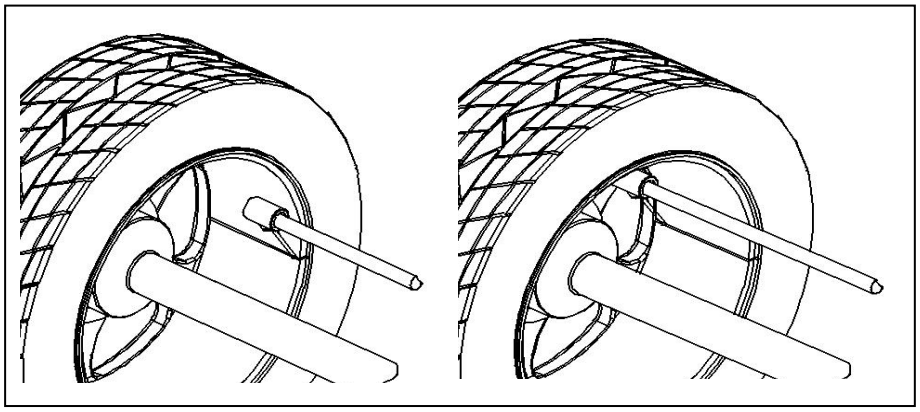
We can aitomatically measure the value of A, A+, D and B through the automatic and width scales. When measure, first pull out the automatic scale to make the laser point fall at the calibration surface of the weight and then rotate the automatic scale to make the laser point fall at the horizontal projection of the laser ray. About 2seconds later, the value of A（or A+）and D will be input automatically and the aitomatic scale will be retrack to its home position. The measurement of the value of B is automatically through the width scale. Rotate the width scale until it reach the calibration surface of the weight and about 2seconds later, the value of B will be input and retaract the width back to the home position after measurement, The measurement position of automatic and width scale in each mode are as shown in the follows.



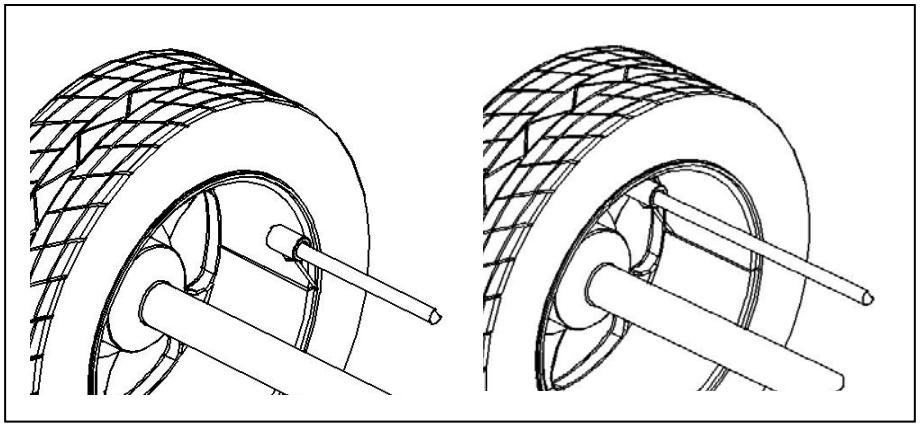
In DYN mode, we needmeasure the parameters of A, D and B.



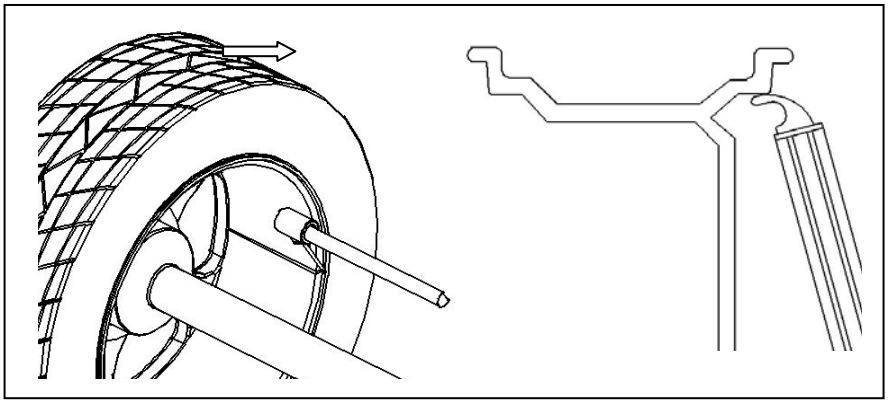
In ALU1 mode, we need measure the parameters of A, D and B.



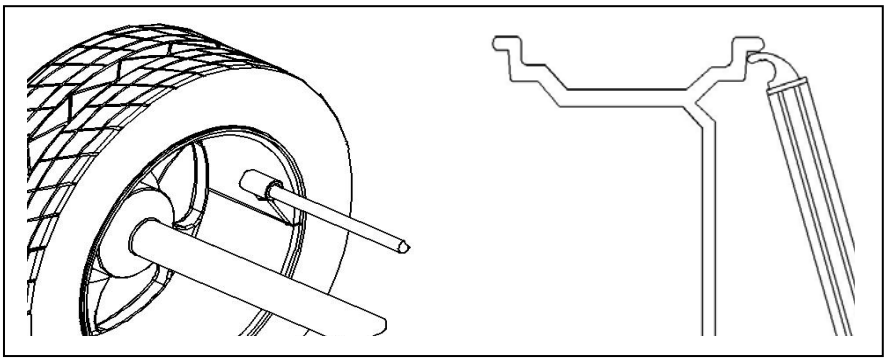
In ALU2 mode, we need measure the parameters of A、A+ and D.



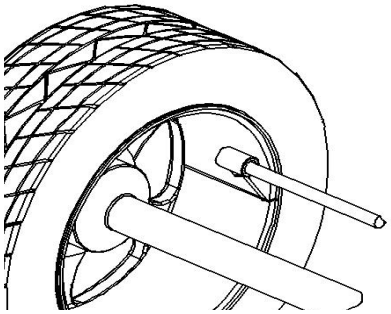
In ALU3 mode, we need to measure the parameter of A, A+ and D.



In ALU4 mode, we need to measure the parameter of A, D and B



In ALU5 mode, you need to measure the poarameter of A、D and B



In MATCH mode, youneed to measure the parameter of D

7.4Customer self-calibration

Select the menu in the mode selection menu and the icon will be enlarged and light up. Move downward the joystick to enter the system setup menu and move backward the joystick to select the customer self-calibration icon and the icon will be enlarged and light up as shown in FIG19. Move downward the joystick to confirm and the machine will enter the customer self-calibration interface as shown in FIG20 in which the customer can complete the self-calibration according to the pictures on top and the words on the left in the customer self-calibration interface. The instruction to the detailed steps are as follows:

Fix the wheel for self-calibration ⟹ Press down the joystick for 2times to enter the parameter input as shown in FIG21 ⟹ Use the automatic scale to measure the value of A and D and use the width scale to measure the value of B ⟹ Lower down th eprotective cover and the machine runs ⟹ After the end of the running, rotate the wheel until the angle indicator ouside change from green triangle to the thumb and stop as shown in FIG22. ⟹ Clip the standard weight of 100g at the 12clock position outside ⟹ Lower down the protective cover to run the machine

⟹ After the stop of the run, rotate the wheel until the the angle indicator inside change from green triangle to the thumb and stop as shown in FIG23.

⟹ Clip the standard weight of 100g at the 12clock position inside

⟹ Lower down the protective cover and the machine runs

⟹ After the running stops, press down the joystick to complete the customer self-calibration and enter the interface of balancing the wheel as the FIG24 shown.

FIG 19

FIG 20

FIG22

FIG 21

FIG 24

FIG 23

press down the joystick to complete the customer self-calibration and enter the interface of balancing

7.5Automatic scale self-calibration

Select menu in the mode select menu and the icon will be enlarged and light up. Move downward the joystick to enter the system setup menu and move rightward the joystick to select the automatic scale self-calibration icon which will be enlarged and light up as FIG25 shown. In the interface of automatic scale self-calibration, there are the indication of the picture. You can complete the automatic scale according to the instruction and the detail steps are as follows：

Pull the scale to the position of 5cm and press down the

joystick to confirm as the 1st step of FIG 26 shown Pull the scale at the position of 20cm and press down the joystick to confirm as the second step of the FIG26 shown ⟹ Install the D value self-calibration accessory ⟹ Point the laser point to the base line，Press down the joystick tp confirm as the 3rd step and 4th step of FIG26 shown and press the joystick to confirm and the self-calibration completes.

7.6Width scale self-calibration

Select menu in the mode select menu and the icon will be enlarged and light up. Move downward the joystick to enter the system setup menu and move rightward the joystick to select the width scale self-calibration icon which will be enlarged and light up as FIG27 shown.Press down the joystick to enter the width scale self-calibration interface. In the interface of width scale self-calibration, there are the indication of the picture. You can complete the width scale according to the instruction and the detail steps are as follows：

Pull the width scale to the top of the thread shaft and press down the joystick to confirm as the 1st step of FIG28 shown ⟹ Pull the width scale to the surface of the insulation seat near the rim and press the joystick to confirm as the 2nd step of FIG28 shown Place the width ⟹ scale to the home position and press down the joystick to confirm as the 3rd step of FIG28 shown

self-calibration completes

FIG 25

FIG 26

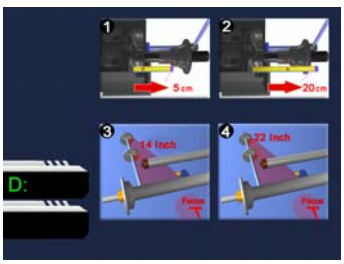


FIG 27

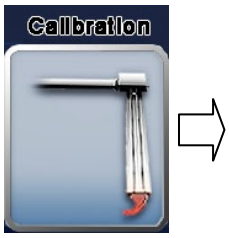


FIG 28

7.7 DYN/STA mode operation

After self-calibration, the system will automatically enter into the wheel balance operation interface and the default mode is DYN/STA mode. The detailed operation process of DYN/STA mode is as fillows:

Fix the wheel on the main shaft of the wheel balancer ⟹ Pull out the automatic scale and the spot laser and the linear laser will automatically light up. Align the projection of the spot laser to the projection of the linear laser and hold on, Retract the automatic scale when hearing the warning tone of the complete of the test and the measurement of A value and D value as FIG29 shown ⟹

Lean the end of the measurement head of the width scale against the outside edge of calibration surface and hold on and retract the automatic scale when hearing the warning tone of the complete of the test and the measurement of B as FIG30 shown Press down the joystick or lower down the protective cover to test as FIG31 shown ⟹ After test, the system will automatically display the value and position of the wheel unbalance weight. Move the joystick downward to check the accuracy as FIG32 shown Along the direction of the green direction of the inside/outside unbalance indication arrow, rotate the wheel until the green triangle arrow is changed to the thumb，Clip the weight at 12 clock position and the value should be corresponding to the test value as FIG33 shown ⟹ After the inside/outside weight are clipped, retest the wheel. ⟹ If the test result meet

the requiremnent, the test comnplete and demount the wheel, If the test result does not meet the requirement, retest and calibrate until meet the requirement.。

In the dynamic mode, if you want to change into the static mode,you only need to move upward the joystick after getting the dynamic balance test result . In this case, you can change into the static balance mode. And the system will automatically change from the dynamic unbalance value into the static unbalance value. The only thinf needs the operator do is to stick the weight according to the display value as FIG34 shown.

FIG 29

FIG 30

FIG 31

FIG 32

FIG 33

FIG 34

7.8 ALU1 mode

Select the ALU1 mode in the mode select menu，the system will automatically enter the ALU1 mode operation interface. The detailed operationa steps of ALU1 mode are as follows:

Fix the wheel on the main shaft of the wheel balancer

⟹ Pull out the automatic scale until reach the inside calibration surface of the rim. Align the projection of the spot laser to the projection of the linear laser and hold on, Retract the automatic scale when hearing the

warning tone of the complete of the test and the measurement of A value and D value as FIG35 shown Lean the end of the measurement head of the width scale against the outside edge of calibration surface and hold on and retract the automatic scale when hearing the warning tone of the complete of the test and the measurement of B as FIG36 shown

⟹ Press down the joystick or lower down the protective cover to test as FIG37 shown ⟹ After test, the system will automatically display the value and position of the wheel unbalance weight. Move the joystick downward to check the accuracy as FIG38 shown ⟹Along the direction of the green direction of the inside/outside unbalance indication arrow, rotate the wheel until the green triangle arrow is changed to the thumb，Clip the weight at 12 clock position and the value should be corresponding to the test value as FIG39 shown ⟹ Pull out the automatic scale when the speed should not too fast or it will not reach the selection position and need the further adjustment. The electromegnic iron will automatically streach out when the scale reach the selected position. Along the direction of the green direction of the inside/outside unbalance indication arrow, rotate the wheel until the green triangle arrow is changed to the thumb. The laser point on the automatic scale will indicate the weight stick position and stick the weight on the rim according to the indication of the laser as FIG 40 shown ⟹ Retest the wheel.⟹ If the test result meet the requiremnent, the test comnplete and demount the wheel, If the test result does not meet the requirement, retest and calibrate until meet the requirement.。

FIG 35

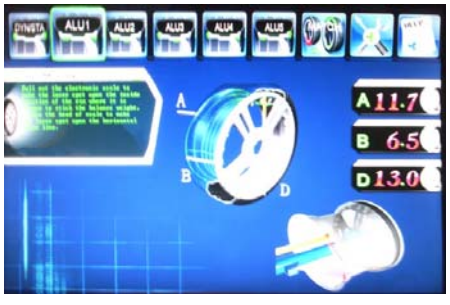


FIG 36

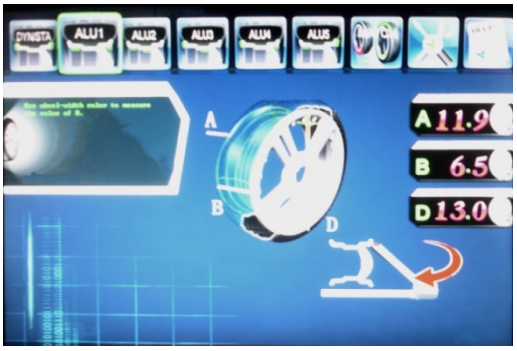


FIG 37

FIG 38

FIG 39

FIG 40

7.9 ALU2 mode

Select the ALU2 mode in the mode select menu，the system will automatically enter the ALU2 mode operation interface. The detailed operationa steps of ALU2 mode are as follows:

Fix the wheel on the main shaft of the wheel balancer ⟹ Pull out the automatic scale until reach the 1st selection position inside the rim. Align the projection of the spot laser to the projection of the linear laser and hold on, Retract the automatic scale when hearing the warning tone of the complete of the test and the measurement of A value and A+ value as FIG41 and FIG42 shown ⟹

Press down the joystick or lower down the protective cover to test the wheel as FIG43 shown ⟹ After the test, the system will autometically display the value and position of the unbalance weight as shown in FIG44 ⟹ Press down the joystick or lower down the protective cover to test as FIG37 shown

⟹ After test, the system will automatically display the value and position of the wheel unbalance weight. Move the joystick downward to check the accuracy as FIG38 shown⟹ Along the direction of the green direction of the inside/outside unbalance indication arrow, rotate the wheel until the green triangle arrow is changed to the thumb，Clip the weight at 12 clock position and the value should be corresponding to the test value as FIG39 shown ⟹ Pull out the automatic scale when the speed should not too fast or it will not reach the selection position and need the further adjustment. The electromegnic iron will automatically streach out when the scale reach the selected position. Along the direction of the green direction of the inside/outside unbalance indication arrow, rotate the wheel until the green triangle arrow is changed to the thumb. The laser point on the automatic scale will indicate the weight stick position and stick the weight according to the method of the ALU1 mode Continue ⟹ pulling the automatic scale with more force making ther electromegnic iron detached until reaching the second selection position (A+).The electromegnic iron will automatically streach out to position the scale. Along the direction of the green direction of the inside/outside unbalance indication arrow, rotate the wheel until the green triangle arrow is changed to the thumb. The laser point on the automatic scale will indicate the weight stick position and stick the weight according to the method of the ALU1 mode as shown in FIG 45 & 46 ⟹ Retest the wheel. If the test result meet the requiremnent, the test comnplete and demount the wheel, If the test result does not meet the requirement, retest and calibrate until meet the requirement.。

FIG 41

FIG 42

FIG 43

FIG 44

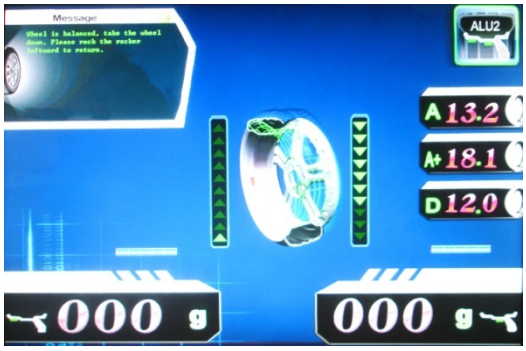


FIG 45

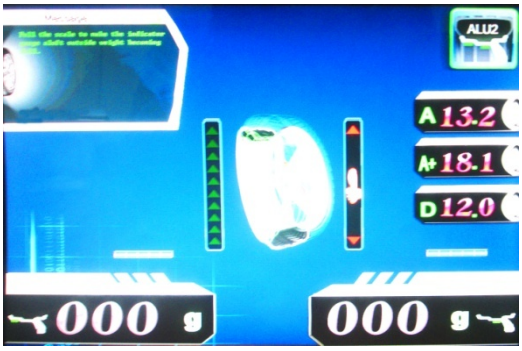


FIG 46

7.10 ALU3 mode

Select the ALU3 mode in the mode select menu，the system will automatically enter the ALU3 mode operation interface. The detailed operationa steps of ALU3 mode are as follows:

Fix the wheel on the main shaft of the wheel balancer ⟹ Pull out the automatic scale until reach the 1st selection position inside the rim. Align the projection of the spot laser to the projection of the linear laser and hold on, Retract the automatic scale when hearing the warning tone of the complete of the test of the measurement of A value and then pull the scale to the 2nd position A+ and retract the automatic scale when hearing the warning tone of the complete of the test of the measurement of A+ value ⟹Press down the joystick or lower down the protective cover to test After test, the system will automatically display the value and position of the wheel unbalance weight. Along the direction of the green direction of the inside/outside unbalance indication arrow, rotate the wheel until the green triangle arrow is changed to the thumb，Clip the weight at 12 clock position and the value should be corresponding to the test value

⟹ Pull out the automatic scale .The electromegnic iron will automatically streach out when the scale reach the second position(A+). Along the direction of the green direction of the inside/outside unbalance

indication arrow, rotate the wheel until the green triangle arrow is changed to the thumb. The laser point on the automatic scale will indicate the weight stick position and stick the weight according to the method of the ALU1 mode and place the automatic scale to the home position ⟹ Retest the wheel. ⟹ If the test result meet the requiremnent, the test comnplete and demount the wheel, If the test result does not meet the requirement, retest and calibrate until meet the requirement.

7.11 ALU4 mode

Select the ALU4 mode in the mode select menu，the system will automatically enter the ALU4 mode operation interface. The detailed operationa steps of ALU4 mode are as follows:

Fix the wheel on the main shaft of the wheel balancer ⟹ Pull out the automatic scale and the spot laser and the linear laser light up automatically. Align the projection of the spot laser to the projection of the linear laser and hold on, Retract the automatic scale when hearing the warning tone of the complete of the test of the measurement of A and D value ⟹ Lean the end of the measurement head agginst the outside of the rim and hold on and retract the width scale when hearing the warning tone of the complete of the test of the measurement of B value ⟹ Press down the joystick or lower down the protective cover to test After test, the system will automatically display the value and position of the wheel unbalance weight. Along the direction of the green direction of the inside/outside unbalance indication arrow, rotate the wheel until the green triangle arrow is changed to the thumb，Clip the weight at 12 clock position and the value should be corresponding to the test value Retest the wheel. ⟹ If the test result meet the requiremnent, the test comnplete and demount the wheel, If the test result does not meet the requirement, retest and calibrate until meet the requirement.

7.12 ALU5 mode

Select ALU5 mode in the mode select menu and the system automatically enter ALU5 mode test interface. The detailed operation steps of ALU5 mode are as follows：

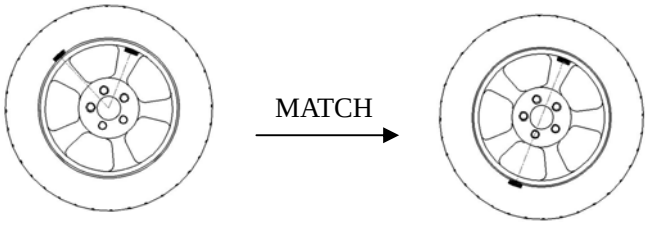
Fix the wheel on the main shaft of the wheel balancer firmly. ⟹Pull the automatic scale to the suitable position inside the rim. Align the projection of the spot laser to the prjection line of the linear laser and hold on. Retract the automatic scale when hear the warning tone and complete the measurement of the values of A and D ⟹ Pull the measurement head of the width scale against the calibration surface outside the rim and hold on and retract the width scale when hear the warning tone to complete the mesurement of the value B ⟹ Press down the joystick or lower down the protective cover to test. ⟹ After the test, the system will display the position and the value of the unbalance weight. ⟹ Along the direction of the green triangular, rotate the wheel until the triangle changes into the thumb. At this moment, clip the suitable weight at the 12clock position on the calibration surface outside the rim ⟹ Pull out the automatic scale and when the scale reaches the selected position, the electromagnet iron will dtrech out automatiucally to position the automatic scale. Along the direction of the green triangular, rotate the wheel until the triangle changes into the thumb. The head of the automatic scale will point to the weight stick position , stick the suitable weight according to the stick method of ALU1 ⟹ Retest the wheel ⟹ If the test result comply with the requirement, demount the tire and the test complete. And retest until comply with the requirement if the test result are not comply

with the requirement.

7.13 MATCH mode

When the static unbalance is overweight (more than 50g), you can use the MATCH function to match the unbalance position of tire and rim to decrease the weight. The work principle are as FIG47.

FIG 47



MATCH operation step：

Fix the wheel on the main shaft of the wheel balancer Measure the diameter of the wheel as shown in FIG48 ⟹ Press down the joystick or lower down the protective cover to test. ⟹Rotate the nozzle of the tire to the 12 clock position and hold on the wheel and press down the joystick to confirm. ⟹ Align to the nozzle and mark at the 6clock position on the tire as shown in FIG49. ⟹ Demount the tire and deflate and then mount on the tire changer. Rotate the related position of the tire to the rim by 180degree that means the mark on the tire aligned to the nozzle as shown in FIG 50.⟹ Inflate the tire and then mount the tire on the wheel balancer and press down the joystick or lower down the protective cover to test the wheel as shown in FIG51. Rotate the nozzle of the wheelt to the 12clock position and hold on the wheel and press down the joystick to confirm and the screen will display the weight and weight of the static unbalance weight of the tire and rim. Determine if you should match the unbalance value according to the minimum static unbalance as shown in the FIG52 and FIG53 ⟹

Along the direction of the green triangular, rotate the wheel until the triangle changes into the thumb. At this moment, mark at the 12clock position on the tire as shown in FIG 53 the suitable weight at the 12clock position on the calibration surface outside the rim. ⟹ Demount the wheel and deflate and then mount on the tire changer. Align the mark on the tire to the nozzle of the rim as shown in FIG54 ⟹ Once again, mount the wheel on the wheel balancer and press down the joystick and the screen will display the current and mount the wheel on the wheel balancer again. Press down the joystick to run the wheel balancer and the screen will display the current static unbalance value and the ideal minimum static unbalance weight. And the word indication column willl indicate the success of the wheel match.

FIG48

FIG 49

FIG50

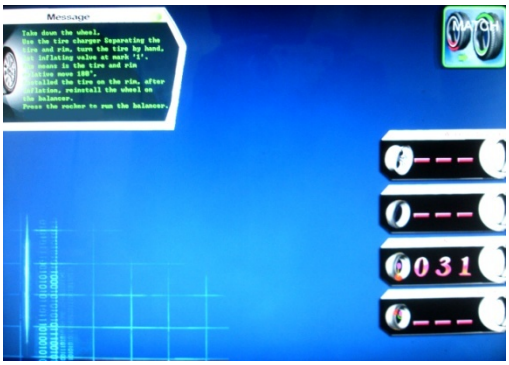


FIG51

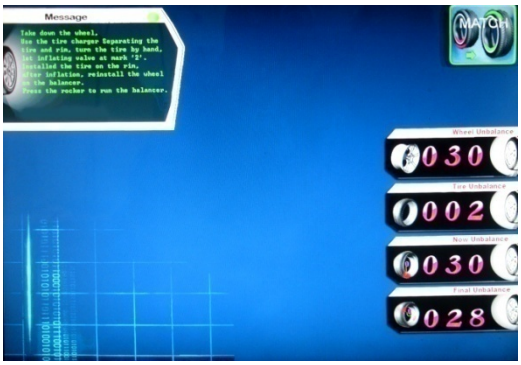


FIG52

FIG53

FIG54

7.14 Weight hide

Weight hide can splot the weight located between the 2 spokes into half to make the 2weight splitted behind the two ajacent spokes to hide the weight and keep the artistic of the wheel. Its work principle as FIG55.

FIG55

This function is only suitable to the modes of ALU2 and ALU3, Take the ALU2 mode for example to illustrate the operation of the weight hide.

In ALU2 mode, run the wheel balancer to get the test result, If the outside weight lies between the2 spokes, we can adopt the weight hide function, The operation is as follows：

Move upward the joystick to access the weight hide function and the system will bounce out the spoke number input column as shown in FIG56⟹ Move upwards or downward to input the number of the spoke and then press down the joystick to confirm as shown in FIG57.⟹ Rotate the wheel to make the ray of the laser fall behind any spoke and then press down the

joystick to confirm as shown in FIG58 ⟹ At this moment. The screen will display the unbalance weight slipped as shown in FIG59.⟹ The position and stick of the inside weight are same to the inside positioning and sticking method of ALU2. Manually rotate the wheel and stick the weight according to the indication of the laser as shown in FIG60 and FIG61.

⟹Once test the wheel⟹

Demount the wheel if the result meets the requirement and retest if not meet the requirement and test again until meet the requirement.

FIG 56

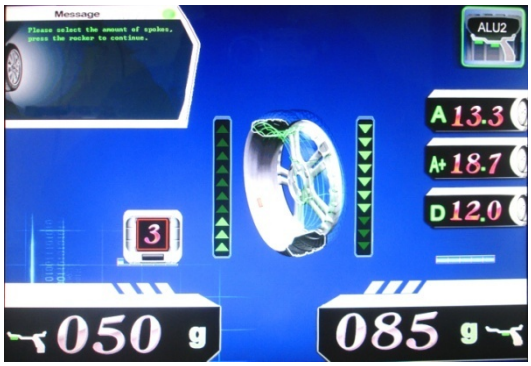


FIG 57

FIG58

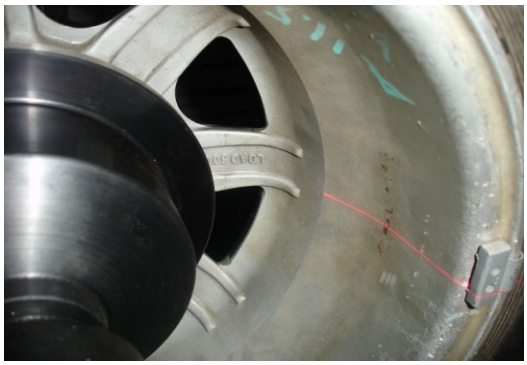


FIG 59

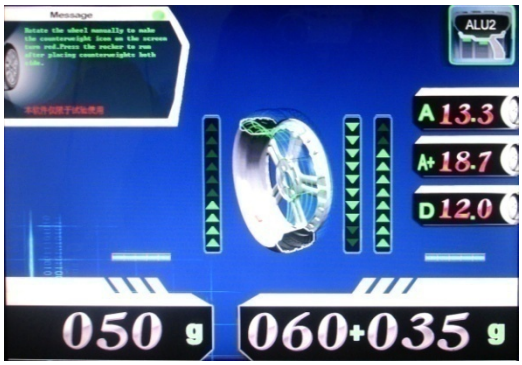


FIG 60

FIG 61

Note：Weight is the intergral multiple of 5g and it will be the intergral multiple of 0.25oz if set to be the ounce. Thus can find the suitable weight. If you want to check the real unbalance weight, you can move the joystick downward.

7.15 Counting function

Select the

menuin the mode selection menu, move the joystick downward to enter the system help menu and select the counting function in the help menu

and the counting function icon will be enlarged and light up as shown in FIG 62. Press down the joystick to confirm and the system will bounce out the counting module as shown in FIG63. In the counting module, the top displays the number of the wheel tested on the very day and the bottom displays the accumulated quantity of the wheels tested.

FIG 62

FIG 63

7.16 Width scale test parameter fine adjustment

When test, if you find there are differences between the wheel width measurement value and the actual value,you can adjust according to the width scale fine adjuistment. The steps of the operation are as follows：

Select menu in the mode select menu. ⟹ Move the joystick downward to enter the parameter setup menu. ⟹ Move the joystick leftward to select the yellow arrow as shown in FIG64 ⟹Move the joystick downward and the password input column will bounce out as shown in FIG65 ⟹Input “222222” in the password input column and press down the joystick to confirm as shown in FIG 66 ⟹ Move the joystick leftward to enter the special parameter setup menu as shown in FIG67 ⟹Select the width scale fin adjustment menu and press down the joystick to confirm as shown in FIG 68. ⟹ System will bounce out the data fine adjustment window. Move the joystick upward/downward to change the parameter until meet the requirement as shown in FIG 69 ⟹ Press down the joystick to confirm and system will automatically back to the operation interface.

7.17 Balance shaft self-calibration

This model of wheel balancer have the self-calibration function. Through the self-calibration, system can filter the unbalance of the unbalance value of the balance shaft to make the test result more accurate. The detailed methods are as follows：

According to the method of 7.15, enter into the special parameter interface and select the balance shaft shaft self-calibration menu as shown in FIG70. ⟹ Press down the joystick to confirm and the system will bounce out the operation indication as shown in FIG 71⟹ According to the indication of the word, mount the special calibration rim or 14"-16" wheelwhich has been calibrated completely well and mount on the wheel balancer and fix. ⟹ Press down the joystick or lower down the protective cover and the machine 3spins automatically not controlled by the man as shown in FIG72. ⟹ According to the menu bounced out, loose the wheel rotate to

the position of 180 degree related to the original position as shown in FIG73 the angle control should be accurate ⟹ Press down the joystick or lower down the protective cover and start the machine 3spins ⟹ After spinning , the system automatically enter into the balance operation interface.

FIG 64

FIG 65

FIG 66

FIG 67

FIG 68

FIG 69

FIG70

FIG71

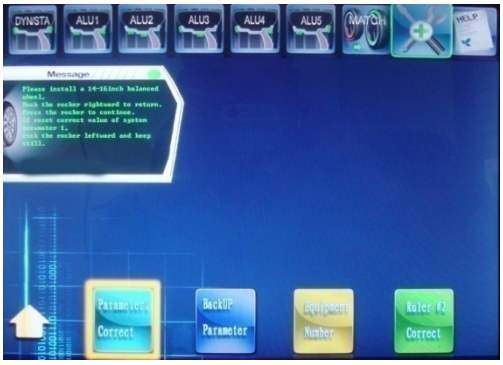


FIG 72

FIG73

8 、Ex-works factory parameter back-up and restore

8.1 Ex-works factory parameter back-up

After complete the machine self-calibration，you can backup the inside parameter calibrated, The detailed operations are as follows:

According to the method in 7.15, enter the special parameter setup interface and select the data backup menu as shown in the FIG74 ⟹ Press down the joystick to confirm and the system remind column will appear to enquiry if you need backup or not

⟹ Press down the joystick to confirm and the system will start backup automatically as shown in FIG75 ⟹ After backup, the system will automatically back to the balance operation interface.

FIG74

FIG75

8.2 Ex-works parameter factory restore

If the inaccuracy of the measurement is for the mistakes of the self-calibration of the electronic measurement scale or the system self-calibration. And also the original statement of the equipment can not be restored. The detailed operation methods are as follows：

Move leftward or rightward the joystick to make the system in the mode of help info and move the joystick downward to select the help info menu. Press down the joystick to confirm as shown in FIG76.⟹ The

screen will bounce out the equipment info column and move the joystick to input the passwardof “123456”, Press down the joystick to confirm as shown in FIG77 ⟹ Screen will display if you need access the parameter as shown in FIG78⟹ Press again down the joystick to enter the restore of the ex-work and the screen will display the status of the restore as shown in FIG79. ⟹ After restall, press down the joystick to back to the balance operation interface.

FIG76

FIG77

FIG78

FIG79

9、Use of grease

9.1 Grease the wheel balancer

The only rotation parts are motor and balancing shaft. If the machine is often used more than 2hours every day, we should check the bearing one time every year. If the machine is not often used, check it one time every year. The bearing should not be opened for the test, so insert a screwdriver and check the sound produced. As the bearing acts as a clamping support, it is not easy to change or take out the grease. In addition, the rotation speed is not high for the machine, so it is not necessary to change the grease. If you notice an incorrect working or a noisy bearing, replace the bearing. If the customer confirms that the bearing has not been replaced, just change the grease, then disassemble the bearing, open the dust guard ring and add the grease (XHP103), carrying out these operations under the guidance of a professional. Calibrate the machine after replacing the bearing. If the operation has not been carried out correctly, the machine precision will be affected, so reposition the dust guard ring, reassemble the machine and repeat the adjustment.

9.2Wheel Balancer Grease Safety Data

(Mobilgrease XHP)	103
NLGI level	3
Thickner type	Lithium Coplex
Color, visual check	Dark blue
Work penetration grade， 25ºC , ASTM D 217， mm/10	235
Drop point， ºC , ASTM D 2265	280
Base oil viscosity grade，ASTM D 445，cSt at 40ºC	100
Peneration variation，ASTM D 1831，mm/10	10
Four ball wear test，ASTM D 2266, grind，mm	0.5
Four-ball welding capacity，ASTM D 2509，Kg	315
Timken OK capability，ASTM D 2509，pound	45
Oxidition Stability ，ASTM D 942，100 hour pressure decrease，kPa	35
Anti-rust，ASTM D 1743	合格
Emcor rust，IP 220，acidity water	0
Rust protection，IP 220-mod, distilled water washout	0
Copper disk corrosion，ASTM D 4048	1A
anti-water spray，ASTM D 4049，% spray loss	15
Water washout，ASTM D 1264，weight loss percent (wt%)，at 79ºC	5

WARNING

The manufacturer will not be responsible for the machine issues caused by the non-original spare parts and accessories

WARNING

Pull out the power plug abd secure all the movable poarts are locked before modified and maintanence

WARNING

Do not remove of improve any part of the machine except the maintanence.

CAUTION

*Keep the working site clean.

*Never use tge compressed are or the water spray nozzle to remove the dust and residual on the machine.

*By all means to prevent the dust coming out from the buildings or in the process of clean operation.

*Keep the balance shaft, nut , cone and flange clean. If you want to clean all these parts, you should use the brush soaked in the neutral solution.

*Carefully use the cone and flange to avoid the accidental fall down or the other damage causing the deformation. The damage of the cone and flange will cause the centering inaccurately when mount the wheel.

*After usage, place the cone and flange in the dust-proof space and use the ethanol when necessary.

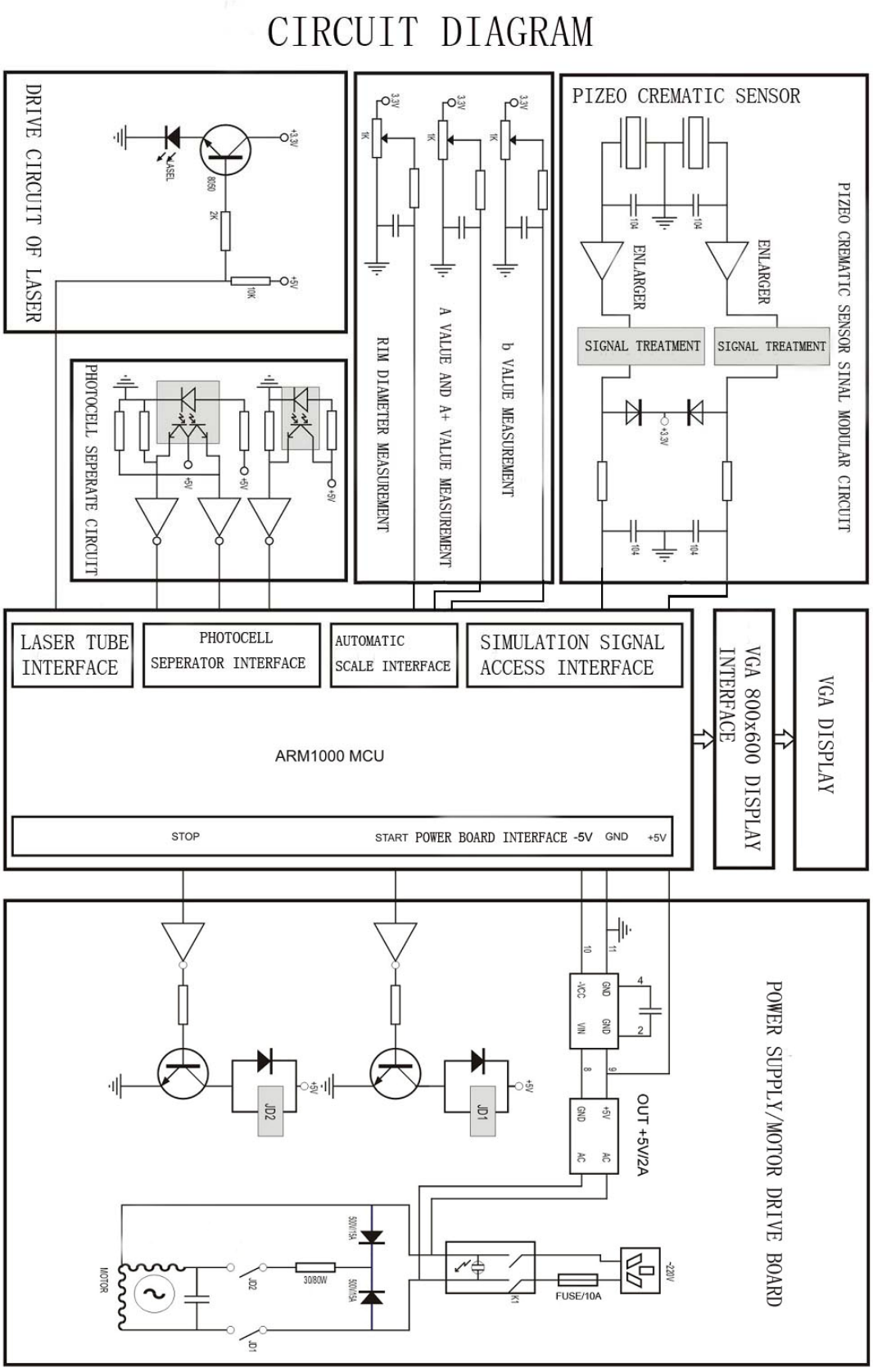
*Calibrate every 6months or the test accuracy is inaccurate.

10、Wheel balancer daily maintanence

11、WHEEL BALANCER TROUBLESHOOTING ANALYSIS

Phenomenon	Cause analysis
After we switch on the machine, it is blank screen without display.	Power switch damaged Signal cable between LCD and the computer board connect no good and please check the cable LCD damaged Power board damaged
Boot up the computer and the LCD will display the load of the system succeed and please input the command.	Contact of the cables of display card board and computer board no good. Computer board broken and change the computer board. Display card broken.
After the boot-up of the computer, the LCD display normal and the motor will not rotate after start up.	Do not lower the hood and the display has the indication. The contact of the 3 motor leads and relay no good. The control of the computer to the relay inactive and change computer board. Relay broken, change the power board. Motor broken.
When start, the revolution of the motor very high and do not brake.	The cable connect of the position sensor to the computer board not reliable. Check the cable. Position sensor signal unnormal. Fine adjust the height of the position sensor. After adjust, use your hande to rotate the wheel to check if the sensor contact with the tooth disk to avoid the damage to the couple on the position sensor. Position sensor couple damaged and change.
After start, the dispolay is normal and the press key without reaction. Or in the test process, it cannot brake and there no change on the display.	Computer board was interfered and system halted. Switch off the power support and restart.
Customer self-calibration error and the display indicate the self-calibration failure.	Do not clip the weight of 100g and dispay has indication. Cable of the piezoe sensor boken and connect no good. Sensor broken.
Dimensions of automatic scale and width scale is clearly incorrect	Check the cable connect between the potentionmeter and the computer is reliable or not. Potentionmeter damage and change. Re-selfcalibrate the automatic and width scale.
Test process normal but the unbalance value displayed errors clearly	Input os the wheel size is not correct. Check the input is correct or not. Use the 14”or 15” wheel balanced and clip the weight with the weight known and test.Ifthe result exceed the tolerance of ±10%，need the re-calibration on the equipment.
When repeat spinning, the test result displkayed changes too big over 5g.	Foreign body in the tire or the pressure inside the tire not enough. Wheel is not fixed. The ground is not flat and there is small vibration when test. Please install the anchor bolt. When necessary, use 14”or 15” wheel to re-selfcalibrate the equipment.
Wheel Test result is 0-0	The minimum display weight is too bigger. Setup the minimum display weight to be 5g. Pizeo sensor cable broken or contact not good.

12 Electrical System



13、WEARING PARTRS LIST

No	Part Name	Quantity	Model	Position
1	Bearing	1	6005Z	Balance Shaft
2	Bearing	1	6006Z	Balance Shaft
3	Bearing	2		Motor
4	Fuse	1	5A	On Power board
5	Locknut	1	40mm	Lock the wheel
6	Computer Board	1		Insiude the body of the wheel balancer
7				
8				